

CLAIMS

1. In a data processing system having a first processor with a first software architecture,
the improvement comprising:

5 a. a plurality of emulation objects each executable by said first processor wherein each of
said emulation objects emulates operation of a different one of a plurality of target processors
wherein each of said plurality of target processors has a software architecture different from said
first software architecture.

10 2. An improvement according to claim 1 wherein each of said emulation object is
compatible with said first software architecture.

15 3. An improvement according to claim 2 wherein at least one of said plurality of
emulation objections further comprises an array of procedures compatible with said first software
architecture and a list of instructions compatible with a second software architecture.

 4. An improvement according to claims 3 wherein said list of instructions includes
specialized instructions for communications processing.

20 5. An improvement according to claim 4 wherein each of said array of procedures
corresponds to a one of said list of instructions through the use of an operation code and
corresponding four bit field.

6. An apparatus comprising:

a. a first instruction processor having a first software architecture; and

b. a plurality of emulation objects responsively coupled to said first instruction processor

wherein each of said plurality of emulation objects permits said first instruction processor to

5 emulate a different one of a plurality of target processors and wherein each of said plurality of target processors has a software architecture different from said first software architecture.

7. An apparatus according to claim 6 further comprising a first computer program having a first plurality of instructions which are compatible with said first software architecture.

10 8. An apparatus according to claim 7 wherein said first plurality of instructions further comprises a specialized communication instruction.

15 9. An apparatus according to claim 8 wherein a first one of said emulation objects further comprises an array of procedures and a list of instructions.

10. An apparatus according to claim 9 wherein each of said procedures of said array of procedures is directly linked to a different one of said list of instructions.

20 11. A method of emulating a plurality of target processors by a first processor having a first software architecture incompatible with the software architectures of said plurality of target processors, the method comprising:

a. executing a first emulation object corresponding to a first of said plurality of target

processors; and

b. executing another emulation object corresponding to another of said plurality of target processors.

5 12. A method according to claim 11 further comprising repeating steps b for each of said plurality of target processors.

13. A method according to claim 12 wherein said first emulation object further comprises a specialized instruction.

10 14. A method according to claim 13 wherein said specialized instruction further comprises an instruction for communication processing.

15 15. A method according to claim 14 wherein said first emulation object further comprises an array of procedures.

16. An apparatus comprising:

a. means having a first software architecture for executing computer instructions compatible with said first software architecture; and

20 b. means responsively coupled to said executing means for containing a plurality of emulation objects wherein each of said plurality of emulation objects corresponds to a different one of a plurality of target processors and each of said plurality of target processors has a software architecture which is incompatible with said first software architecture.



17. An apparatus according to claim 16 wherein a first of said emulation objects further comprises an array of procedures.

18. An apparatus according to claim 17 wherein said first of said emulation objects
5 further comprises a list of instructions wherein each of said array of procedures corresponds to a different one of said list of instructions.

19. An apparatus according to claim 18 wherein at least one of said list of instructions further comprises a communication processing instruction.

20. An apparatus according to claim 19 wherein said list of instructions further
10 comprises a plurality of communication processing instructions.